We Claim:

1. A method for treatment of an apoptosis-related disease in a subject comprising administering to said subject a therapeutically effective amount of an inhibitor of the IDH polypeptide, in a dosage sufficient to inhibit IDH so as to thereby treat the subject.

2. A method according to claim 1 wherein the inhibitor is administered in conjunction with a chemotherapeutic agent.

3. A method according to claim 1 wherein the inhibitor is an antibody.

4. A method according to claim 1 wherein the inhibitor is a chemical molecule selected from the group consisting of 2-(4-bromo-2,3-dioxobutylthio)-1, N6-ethenoadenosine 2',5'-bisphosphate, NADP oxoglutatrate, o-(carboxymethyl) oxalohydroxamate, oxalylglycine, 3-. bromo-2-ketoglutarate, beta-mercapto-alpha-ketoglutarate, beta-methylmercapto-alpha-ketoglutarate, beta-methylmercapto-alpha-hydroxyglutarate, adriamycin and alpha-methylisocitrate.

5. A method according to claim 1 wherein the inhibitor is an AS fragment comprising consecutive nucleotides having the sequence set forth in SEQ ID NO:5.

6. A method according to claim 1 wherein the apoptosis-related disease is a cancer.

7. A method for potentiating a chemotherapeutic treatment of an apoptosis-related disease in a subject comprising administering to said subject a therapeutically effective amount of an inhibitor of the human IDH· polypeptide in conjunction with a chemotherapeutic agent.

8. A method according to claim 7 wherein the inhibitor is an antibody.

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9. A method according to claim 7 wherein the inhibitor is a chemical molecule selected from the group consisting of 2-(4-bromo-2,3-dioxobutylthio)-1, N6-ethenoadenosine 2',5'-bisphosphate, NADP oxoglutatrate, o-(carboxymethyl) oxalohydroxamate, oxalylglycine, 3-bromo-2-ketoglutarate, beta-mercapto-alpha-ketoglutarate, beta-methylmercapto-alpha-ketoglutarate, beta-methylmercapto-alpha-hydroxyglutarate, adriamycin and alpha-methylisocitrate.

10. A method according to claim 7 wherein the inhibitor is an AS fragment comprising consecutive nucleotides having the sequence set forth in SEQ ID NO:5.

11. A method according to claim 7 wherein the apoptosis-related disease is a cancer.

12. An antisense oligonucleotide capable of inhibiting the expression of the IDH polypeptide, having the sequence set forth in SEQ ID NO:5.

13. An expression vector comprising a nucleic acid molecule encoding the antisense oligonucleotide of claim 12.

14. A process for determining the susceptibility of a subject to a chemotherapeutic treatment of an apoptosis-related disease comprising:

(a) providing the average, normal level of the IDH polypeptide in the cells of healthy subjects;

(b) determining the level of the IDH polypeptide in said subject;

(c) comparing the levels obtained in (a) and (b) above, a low level of IDH polypeptide in said subject as compared to the level in healthy subjects indicating a susceptibility of said subject to a chemotherapeutic treatment of said apoptosis-related disease.

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15.    A process for determining the susceptibility of a subject to a chemotherapeutic treatment of an apoptosis-related disease comprising:

(a)   providing the average, normal level of mRNA encoding the IDH polypeptide in the cells of healthy subjects;

(b)   determining the level of mRNA encoding the IDH polypeptide in said subject;

(c)   comparing the levels obtained in (a) and (b) above, a low level of mRNA encoding IDH in said subject as compared to the level in healthy subjects indicating a susceptibility of said subject to a chemotherapeutic treatment of said apoptosis-related disease.

16.    A process for determining the efficacy of a chemotherapeutic treatment administered to a subject comprising:

(a)   determining the level of the IDH polypeptide in the subject prior to a treatment;

(b)   determining the level of the IDH polypeptide in the subject after the treatment;

(c)   comparing the levels obtained in (a) and (b) above, a high level of IDH polypeptide prior to the treatment as compared to the level after the treatment indicating efficacy of the treatment.

17.    A process for determining the efficacy of a chemotherapeutic treatment administered to a subject comprising:

(a)   determining the level of the IDH mRNA in the subject prior to a treatment;

(b)   determining the level of the IDH mRNA in the subject after the treatment;

(c)   comparing the levels obtained in (a) and (b) above, a high level of IDH mRNA prior to the treatment as compared to the level after the treatment indicating efficacy of the treatment.

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18.   A process of diagnosing a cancer in a subject comprising:

   (a)   providing the average, normal level of the IDH polypeptide in the cells of healthy subjects;

   (b)   determining the level of the polypeptide in said subject;

   (c)   comparing the levels obtained in (a) and (b) above, wherein a high level of the IDH polypeptide in said subject as compared to the level in healthy subjects is indicative of a cancer.

19.   A process of diagnosing a cancer in a subject comprising:

   (a)   providing the average, normal level of a polynucleotide encoding the IDH polypeptide in the cells of healthy subjects;

   (b)   determining the level of the polynucleotide in said subject;

   (c)   comparing the levels obtained in (a) and (b) above, wherein a high level of the polynucleotide in said subject as compared to the level in healthy subjects is indicative of a cancer.

20.   A process for obtaining a compound which modulates apoptosis in a cell comprising:

   (a)   providing cells which express the human IDH polypeptide;

   (b)   contacting said cells with said compound; and

   (c)   determining the ability of said compound to modulate apoptosis in the cells.

21.   A process according to claim 20 comprising:

   (a)   providing test cells and control cells which express the human IDH polypeptide at a level at which approximately 50% of the cells undergo apoptosis in the presence of an apoptosis-stimulating agent;

   (b)   contacting said test cells with said compound;

   (c)   treating said cells in conjunction with step (b) with an amount of apoptosis-stimulating agent capable of causing apoptosis in the control cell; and

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**(d)** determining the ability of said compound to modulate apoptosis in the test cell.

**22.** A process for obtaining a compound which promotes apoptosis in a cell comprising:

**(a)** providing a test cell which expresses the human IDH polypeptide and a control cell which does not express the human IDH polypeptide;

**(b)** contacting said cells with said compound;

**(c)** treating said cells in conjunction with step (b) with an amount of apoptosis-stimulating agent capable of causing apoptosis in the control cell but not in the test cell in the absence of said compound; and

**(d)** determining the ability of said compound to promote apoptosis in the test cell.

**23.** A process for obtaining a compound which modulates apoptosis through the human IDH polypeptide comprising:

**(a)** measuring the activity of the human IDH polypeptide, or a fragment thereof having viability activity,

**(b)** contacting said polypeptide or fragment with said compound; and

**(c)** determining whether the activity of said polypeptide or fragment is modulated by said compound.

**24.** A process for obtaining a compound which modulates apoptosis through the human IDH polypeptide comprising:

**(a)** measuring the binding of the human IDH polypeptide, or a fragment thereof having viability activity, to a species to which the human IDH polypeptide interacts specifically *in vivo* to produce an anti-apoptotic effect;

**(b)** contacting said polypeptide or fragment with said compound; and

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(c) determining whether the activity of said polypeptide or fragment is affected by said compound.